

## Supplemental Material

**Supplementary Table 1.** Partial Spearman correlation coefficients\* among plasma and erythrocyte VLCSFAs, long-chain n-3 fatty acids, and *trans* fatty acids among controls in the HPFS (n=816) and NHS (n=329).

	Plasma			Erythrocytes			C20:5n-3†	C22:5n-3†	C22:6n-3†	<i>trans</i> -18:1 isomers†	Total <i>trans</i> isomers†
	C20:0	C22:0	C24:0	C20:0	C22:0	C24:0					
<b>Plasma</b>											
<i>HPFS</i>											
C20:0	1.0	0.68	0.66	0.37	0.27	0.20	0.06	0.09	0.15	-0.02	-0.07
C22:0	-	1.0	0.89	0.27	0.35	0.29	0.05	0.15	0.16	-0.07	-0.14
C24:0	-	-	1.0	0.22	0.28	0.23	0.11	0.21	0.22	-0.12	-0.18
<i>NHS</i>											
C20:0	1.0	0.69	0.51	0.49	0.34	0.20	0.08	-0.05	0.09	0.09	0.08
C22:0	-	1.0	0.88	0.33	0.30	0.22	0.16	0.19	0.14	-0.20	-0.20
C24:0	-	-	1.0	0.19	0.18	0.24	0.18	0.30	0.19	-0.36	-0.36
<b>Erythrocytes</b>											
<i>HPFS</i>											
C20:0	0.37	0.27	0.22	1.0	0.51	0.31	0.02	0.16	0.12	0.07	0.06
C22:0	0.27	0.35	0.29	-	1.0	0.78	-0.03	0.33	0.16	0.03	-0.01
C24:0	0.20	0.29	0.23	-	-	1.0	0.08	0.41	0.26	-0.17	-0.22
<i>NHS</i>											
C20:0	0.49	0.33	0.19	1.0	0.71	0.27	-0.19	-0.19	-0.19	0.50	0.52
C22:0	0.34	0.30	0.18	-	1.0	0.63	-0.13	-0.02	-0.01	0.23	0.24
C24:0	0.20	0.22	0.24	-	-	1.0	0.10	0.28	0.24	-0.22	-0.21

Abbreviations: BMI, body mass index; MET, metabolic equivalent of task; AHEI, alternative healthy eating index; VLCFA, very-long chain fatty acid.

\*Partial correlation coefficients were adjusted for age at blood draw (yr), smoking status (never, past, current), fasting status (yes, no), time of blood draw, BMI ( $\text{kg}/\text{m}^2$ ), alcohol intake (abstainer,  $<5.0$ ,  $5.0\text{-}14.9$ ,  $\geq 15.0$  g/day), physical activity (METs-hr/week), and AHEI score.

†Correlation coefficients were calculated among fatty acids in the same compartment (either plasma or erythrocytes).

**Supplementary Table 2.** Partial Spearman correlation coefficients\* between plasma and erythrocyte VLCSFAs with select metabolic risk factors among controls in the HPFS and NHS.

	TC	LDL-C	HDL-C	TG	hsCRP	TNF-R1	TNF-R2	IL-6	HbA1c	Total Adiponectin
<b>Plasma†</b>										
<i>HPFS</i>										
C20:0	-0.08§	-0.01	0.16§¶	-0.36§¶	-0.05	-0.01	-0.01	0.02	-0.01	0.08
C22:0	0.04	0.13§¶	0.26§¶	-0.40§¶	-0.06	-0.05	-0.03	-0.01	-0.03	0.15§
C24:0	0.03	0.11§	0.31§¶	-0.45§¶	-0.07§	-0.08	-0.05	-0.02	-0.02	0.15§
Total VLCFAs	0.02	0.11§	0.28§¶	-0.44§¶	-0.07	-0.06	-0.04	-0.01	-0.02	0.15§¶
<i>NHS</i>										
C20:0	-0.05	0.02	0.24§¶	-0.56§¶	-0.17§¶	-0.12	-0.11	-0.09	-0.04	0.20§¶
C22:0	-0.03	0.06	0.28§¶	-0.58§¶	-0.16§	-0.13	-0.10	-0.06	0.06	0.21§¶
C24:0	0.01	0.06	0.29§¶	-0.47§¶	-0.15§	-0.24§	-0.23§	0.01	0.05	0.17§¶
Total VLCFAs	-0.003	0.06	0.32§¶	-0.58§¶	-0.16§	-0.21§	-0.20§	-0.03	0.06	0.21§¶
<b>Erythrocytes‡</b>										
<i>HPFS</i>										
C20:0	-0.07	0.03	0.18§¶	-0.35§¶	0.01	-0.10§	-0.11§	-0.02	0.04	0.07
C22:0	-0.04	0.03	0.09§	-0.20§¶	0.06	0.001	-0.006	0.05	-0.02	-0.02
C24:0	-0.06	-0.02	0.04	-0.11§	0.10§	-0.02	-0.04	0.07	-0.01	-0.07
Total VLCFAs	-0.05	-0.005	0.06	-0.15§¶	0.09§	-0.02	-0.04	0.07	-0.02	-0.05
<i>NHS</i>										
C20:0	0.02	0.10	0.12§	-0.29§¶	-0.21§¶	-0.05	-0.08	-0.16§	-0.16§	0.13§
C22:0	0.02	0.10	0.02	-0.14§	-0.10§	-0.004	-0.01	-0.05	-0.12§	-0.004
C24:0	-0.06	0.01	-0.02	-0.06	0.10	-0.001	-0.01	0.13	0.02	-0.15§
Total VLCFAs	-0.03	0.06	-0.004	-0.11	0.02	-0.03	-0.05	0.05	-0.04	-0.11

Abbreviations: BMI, body mass index; MET, metabolic equivalent of task; MI, myocardial infarction; AHEI, alternative healthy eating index; TC, total cholesterol; LDL-C, low-density lipoprotein cholesterol; HDL-C, high-density lipoprotein cholesterol; TG, triacylglycerol; hsCRP, high-sensitivity C-reactive protein; TNF-R, tumor-necrosis factor receptor; IL-6, interleukin-6; HbA1c, hemoglobin-A1c; VLCFA, very-long chain fatty acid.

\*Partial correlation coefficients were adjusted for age at blood draw (yr), smoking status (never, past, current), fasting status (yes, no), time of blood draw, BMI ( $\text{kg}/\text{m}^2$ ), alcohol intake (abstainer, <5.0, 5.0-14.9,  $\geq 15.0 \text{ g/day}$ ), physical activity (METs-hr/week), and AHEI score.

†In the HPFS, n=816 for TC, HDL-C, TG, and hsCRP; 815 for LDL-C; 481 for TNF-R1, TNF-R2, IL-6, and total adiponectin; and 813 for HbA1c. In the NHS, n=405 for TC and HDL-C; 399 for LDL-C; 394 for TG; 401 for hsCRP; 185 for TNF-R1 and TNF-R2; 183 for IL-6; 359 for HbA1c; and 403 for total adiponectin.

‡In the HPFS, n=813 for TC, HDL-C, TG, and hsCRP; 812 for LDL-C; 481 for TNF-R1, TNF-R2, IL-6, and total adiponectin; and 813 for HbA1c. In the NHS, for correlation coefficients of C20:0 and C22:0, n=370 for TC and HDL-C; 364 for LDL-C; 359 for TG; 366 for hsCRP; 178 for TNF-R1 and TNF-R2; 176 for IL-6; 331 for HbA1c; and 369 for total adiponectin; for correlation coefficients of C24:0 and total VLCFAs, n=323 for TC, TG, HDL-C, and hsCRP; 322 for LDL-C and total adiponectin; 131 for TNF-R1 and TNF-R2; 130 for IL-6; and 284 for HbA1c.

§P<0.05

¶P<0.00125 (0.05/40 comparisons in each cohort).

**Supplementary Table 3.** Partial Spearman correlation coefficients\* between serum VLCSFAs and various cardiometabolic risk markers in the NHANES†.

Unit of fatty acids	TC	LDL-C	HDL-C	TG	hsCRP	Glucose	HbA1c	Insulin	C-peptide
<i>Men (n=606)</i>									
C20:0	-0.09‡	0.05	0.25§	-0.57§	0.01	0.01	0.02	-0.09‡	-0.12‡
C22:0	-0.05	0.12‡	0.27§	-0.61§	-0.03	0.01	0.04	-0.10‡	-0.16§
C24:0	-0.03	0.12‡	0.36§	-0.63§	-0.04	-0.001	0.004	-0.17§	-0.24§
Total VLCFAs	-0.05	0.11‡	0.31§	-0.64§	-0.03	0.01	0.02	-0.13‡	-0.19§
<i>Women (n=667)</i>									
C20:0	-0.09‡	0.05	0.08	-0.61§	-0.10‡	-0.02	-0.001	-0.18§	-0.17§
C22:0	-0.06	0.11‡	0.07	-0.63§	-0.13‡	0.01	0.09‡	-0.17§	-0.19§
C24:0	-0.08‡	0.06	0.13‡	-0.64§	-0.16§	0.03	0.09‡	-0.19§	-0.21§
Total VLCFAs	-0.08‡	0.08‡	0.10‡	-0.66§	-0.14§	0.01	0.08‡	-0.19§	-0.20§

\* For the current analysis, we excluded NHANES participants with self-reported CVD, diabetes, or cancer, and correlation coefficients were adjusted for age (yr), ethnicity (non-Hispanic white, non-Hispanic black, Mexican American, other Hispanic groups, and other ethnicity), educational attainment (high school and below, college, and graduate school), BMI (kg/m<sup>2</sup>), smoking status (never, past, current), alcohol intake (abstainer, 1 drink/day, 2+ drinks/day), and physical activity (engage in vigorous activities or not).

†NHANES participants with self-reported cardiovascular disease, diabetes, or cancer were excluded from analysis.

‡P<0.05

§P<0.00056 (0.05/90 comparisons).

**Supplementary Table 4.** Distribution of baseline characteristics\* by quintiles of total VLCSFAs in plasma in the controls, NHS and HPFS.

Characteristics	Nurses' Health Study			Health Professionals Follow-up Study		
	Quintiles of VLCSFAs			Quintiles of VLCSFAs		
	1	3	5	1	3	5
Age at blood sample collection (year)	61.3	60.0	58.7	65.7	62.6	62.5
Body mass index (kg/m <sup>2</sup> )	25.8	25.3	24.8	26.5	25.3	25.0
Physical Activity (MET-hr/week)	14.4	19.0	16.8	34.1	41.5	42.6
Alcohol intake (g/day)	7.1	7.5	6.0	14.7	12.3	11.4
Alternate Healthy Eating Index	37.2	39.2	39.1	42.5	41.8	41.1
Total calories (kcal/day)	1697	1819	1759	2041	1966	2088
Carbohydrate (% of energy)	48.3	48.4	47.2	49.1	49.8	47.8
Protein (% of energy)	18.3	18.2	18.8	17.8	18.0	17.7
Fat (% of energy)	32.3	32.7	33.7	30.1	30.0	32.6
Saturated fat (% of total fat)	35.0	34.5	34.7	33.0	33.7	33.3
Monounsaturated fat (% of total fat)	37.1	37.2	37.0	38.9	38.6	39.1
Polyunsaturated fat (% of total fat)	19.1	19.6	19.6	18.8	18.5	18.7
<i>Trans</i> fat (% of total fat)	4.9	4.7	4.5	4.3	4.3	4.5
Dairy food (servings/day)	2.1	2.2	2.1	2.0	2.1	2.3
Fruits (servings/day)	2.2	2.4	2.3	2.7	2.7	2.4
Vegetables (servings/day)	3.1	3.5	3.3	3.4	3.3	3.2
Red meat (servings/day)	1.0	1.0	0.9	1.1	1.0	1.2
Chicken (servings/day)	0.3	0.4	0.4	0.4	0.3	0.3
Fish (servings/day)	0.3	0.3	0.3	0.3	0.3	0.3
Nuts (servings/day)	0.1	0.2	0.2	0.1	0.1	0.1
Whole grain (grams/day)	16.5	16.5	17.6	28.0	28.0	26.2
Smoking status (%)						
Current smoker	24.4	22.9	18.1	11.5	8.9	7.7
Former smoker	39.0	36.1	42.2	45.5	44.6	58.1
Never smoker	36.6	41.0	39.8	43.0	46.5	34.2
Family history MI (%)	18.3	16.9	19.3	35.6	32.9	32.9

Hypercholesterolemia (%)	48.8	30.1	37.4	47.8	40.9	35.4
Hypertension (%)	39.0	15.7	14.5	36.8	26.2	21.3
Diabetes (%)	6.1	4.8	3.6	4.9	3.7	2.4
Aspirin Use (%)	56.1	71.1	63.9	23.3	22.0	20.1
Fasting status at blood draw (%)	70.7	77.1	68.7	52.2	64.6	55.5
Postmenopausal (%)	96.3	85.5	83.1	-	-	-
Postmenopausal hormone use (%)†	68.4	64.4	62.3	-	-	-

Abbreviations: BMI, body mass index; MET, metabolic equivalent of task; MI, myocardial infarction; AHEI, alternative healthy eating index.

\*Values are mean for continuous variables or % for categorical variables.

†Among postmenopausal women only.

**Supplementary Table 5.** Unadjusted and partially-adjusted hazard ratio (95% CI) of CHD by quintile of fatty acid content of plasma and erythrocytes in the HPFS and NHS.

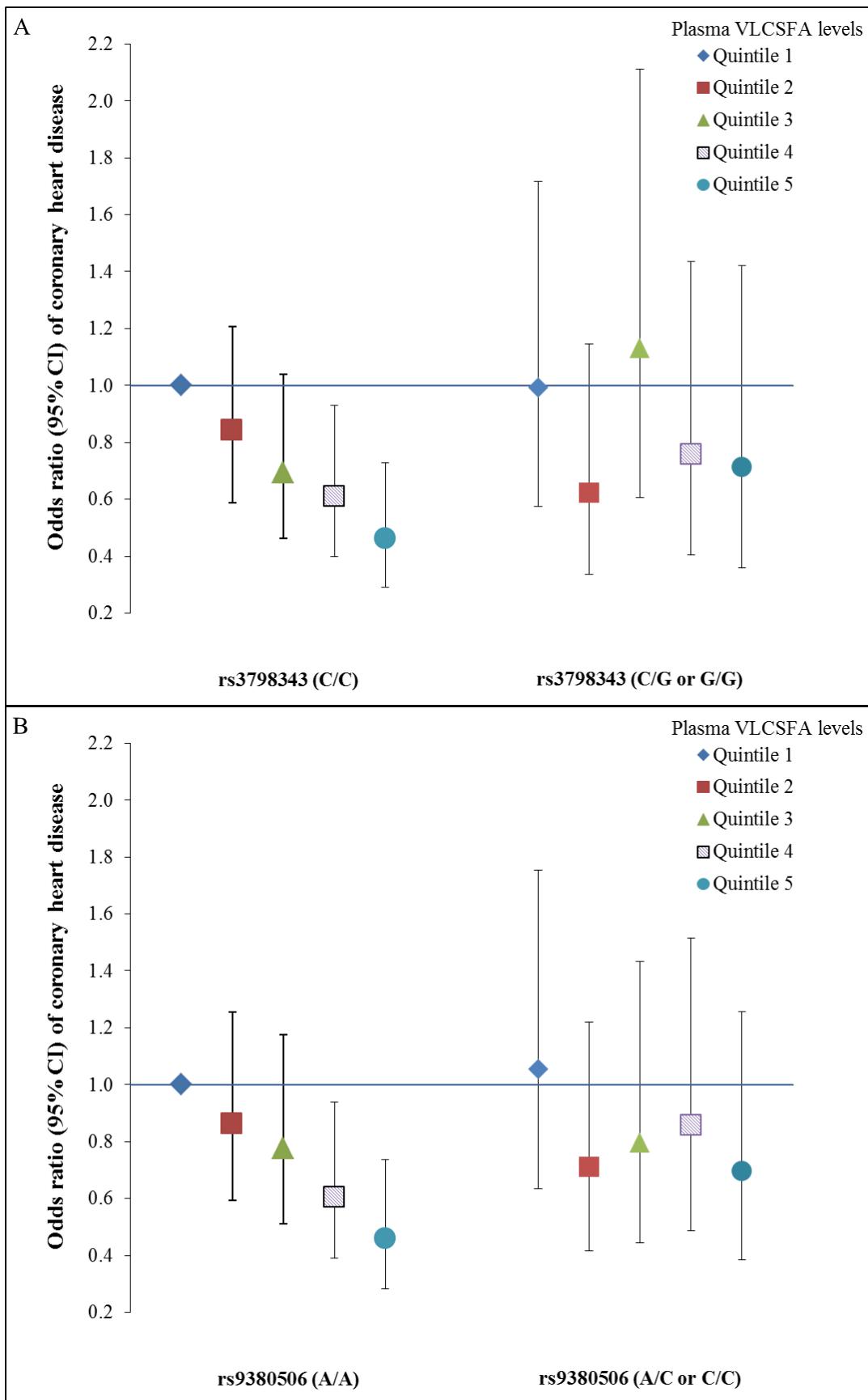
		Quintiles of VLCFAs					P for trend
		1 (lowest)	2	3	4	5 (highest)	
<b>Plasma</b>							
C20:0							
HPFS	Median (range)	0.13 (0.03, 0.15)	0.16 (0.15, 0.17)	0.18 (0.17, 0.19)	0.20 (0.19, 0.22)	0.25 (0.22, 0.63)	-
	Case/control	109/164	94/164	90/163	78/164	75/164	-
	Model 1*	1.0	0.82 (0.56, 1.21)	0.71 (0.47, 1.07)	0.62 (0.40, 0.96)	0.54 (0.34, 0.87)	0.007
	Model 2†	1.0	0.86 (0.57, 1.30)	0.82 (0.53, 1.26)	0.70 (0.45, 1.11)	0.62 (0.37, 1.02)	0.04
NHS	Median (range)	0.15 (0.07, 0.17)	0.18 (0.17, 0.19)	0.21 (0.19, 0.22)	0.23 (0.22, 0.25)	0.26 (0.25, 0.40)	-
	Case/control	96/82	81/83	69/83	54/83	48/83	-
	Model 1*	1.0	0.72 (0.46, 1.13)	0.61 (0.38, 0.98)	0.44 (0.26, 0.75)	0.37 (0.22, 0.64)	<0.0001
	Model 2†	1.0	0.89 (0.54, 1.47)	0.67 (0.39, 1.15)	0.51 (0.29, 0.92)	0.47 (0.25, 0.89)	0.005
C22:0							
HPFS	Median (range)	0.26 (0.02, 0.33)	0.38 (0.33, 0.44)	0.48 (0.44, 0.54)	0.58 (0.54, 0.65)	0.73 (0.65, 1.24)	-
	Case/control	95/163	102/164	87/164	81/164	81/164	-
	Model 1*	1.0	1.03 (0.69, 1.56)	0.83 (0.52, 1.33)	0.68 (0.42, 1.10)	0.65 (0.39, 1.08)	0.03
	Model 2†	1.0	1.15 (0.74, 1.78)	0.91 (0.56, 1.48)	0.79 (0.48, 1.30)	0.76 (0.45, 1.30)	0.12
NHS	Median (range)	0.37 (0.16, 0.43)	0.47 (0.43, 0.51)	0.54 (0.51, 0.58)	0.63 (0.58, 0.67)	0.74 (0.68, 1.24)	-
	Case/control	108/82	70/83	64/83	55/83	51/83	-
	Model 1*	1.0	0.58 (0.37, 0.91)	0.54 (0.33, 0.87)	0.43 (0.26, 0.71)	0.36 (0.21, 0.63)	0.0002
	Model 2†	1.0	0.54 (0.32, 0.90)	0.60 (0.35, 1.04)	0.41 (0.23, 0.73)	0.36 (0.19, 0.68)	0.002
C24:0							
HPFS	Median (range)	0.22 (0.10, 0.28)	0.31 (0.28, 0.36)	0.40 (0.36, 0.45)	0.49 (0.45, 0.55)	0.64 (0.55, 1.05)	-
	Case/control	110/163	96/164	97/164	77/164	66/164	-
	Model 1*	1.0	0.76 (0.51, 1.13)	0.65 (0.42, 1.02)	0.48 (0.29, 0.78)	0.39 (0.23, 0.64)	0.0001
	Model 2†	1.0	0.83 (0.55, 1.25)	0.84 (0.53, 1.34)	0.64 (0.38, 1.07)	0.54 (0.32, 0.91)	0.02
NHS	Median (range)	0.26 (0.09, 0.31)	0.35 (0.31, 0.38)	0.42 (0.38, 0.46)	0.50 (0.46, 0.55)	0.63 (0.55, 2.53)	-

	Case/control	109/82	67/83	72/83	50/83	50/83	-
	Model 1*	1.0	0.56 (0.36, 0.88)	0.57 (0.36, 0.91)	0.39 (0.23, 0.66)	0.34 (0.19, 0.60)	0.0001
	Model 2†	1.0	0.57 (0.34, 0.95)	0.66 (0.39, 1.13)	0.44 (0.25, 0.79)	0.40 (0.21, 0.77)	0.005
Total							
HPFS	Median (range)	0.63 (0.32, 0.78)	0.86 (0.78, 0.97)	1.07 (0.97, 1.17)	1.28 (1.18, 1.40)	1.57 (1.40, 2.66)	-
	Case/control	111/163	90/164	86/164	89/164	70/164	-
	Model 1*	1.0	0.75 (0.50, 1.11)	0.62 (0.40, 0.97)	0.60 (0.38, 0.94)	0.44 (0.27, 0.72)	0.001
	Model 2†	1.0	0.83 (0.55, 1.26)	0.76 (0.48, 1.20)	0.71 (0.44, 1.16)	0.55 (0.33, 0.93)	0.03
NHS	Median (range)	0.83 (0.36, 0.94)	1.03 (0.94, 1.10)	1.18 (1.11, 1.25)	1.34 (1.25, 1.45)	1.63 (1.45, 3.29)	-
	Case/control	105/82	85/83	57/83	53/83	48/83	-
	Model 1*	1.0	0.72 (0.48, 1.10)	0.50 (0.31, 0.81)	0.44 (0.26, 0.73)	0.34 (0.20, 0.59)	<0.0001
	Model 2†	1.0	0.65 (0.40, 1.06)	0.65 (0.37, 1.14)	0.43 (0.24, 0.77)	0.36 (0.19, 0.68)	0.001
RBC							
C20:0							
HPFS	Median (range)	0.31 (0.22, 0.34)	0.35 (0.34, 0.37)	0.38 (0.37, 0.39)	0.40 (0.39, 0.42)	0.44 (0.42, 0.57)	-
	Case/control	113/163	91/162	86/164	80/164	75/163	-
	Model 1*	1.0	0.84 (0.58, 1.22)	0.75 (0.51, 1.10)	0.69 (0.47, 1.01)	0.63 (0.42, 0.95)	0.02
	Model 2†	1.0	0.90 (0.61, 1.32)	0.85 (0.57, 1.26)	0.75 (0.50, 1.13)	0.69 (0.44, 1.07)	0.07
NHS	Median (range)	0.31 (0.21, 0.33)	0.36 (0.34, 0.39)	0.42 (0.39, 0.45)	0.47 (0.45, 0.51)	0.57 (0.51, 0.87)	-
	Case/control	62/75	76/75	57/76	55/75	64/75	-
	Model 1*	1.0	0.95 (0.53, 1.71)	0.59 (0.32, 1.10)	0.46 (0.24, 0.89)	0.44 (0.22, 0.88)	0.004
	Model 2†	1.0	1.17 (0.61, 2.22)	0.86 (0.42, 1.73)	0.61 (0.29, 1.28)	0.60 (0.27, 1.31)	0.06
C22:0							
HPFS	Median (range)	1.21 (0.68, 1.33)	1.44 (1.33, 1.52)	1.59 (1.52, 1.66)	1.73 (1.66, 1.81)	1.90 (1.81, 2.55)	-
	Case/control	78/163	110/163	88/164	80/163	89/163	-
	Model 1*	1.0	1.65 (1.08, 2.52)	1.29 (0.82, 2.01)	1.14 (0.72, 1.80)	1.20 (0.74, 1.95)	0.96
	Model 2†	1.0	1.75 (1.12, 2.73)	1.35 (0.85, 2.15)	1.20 (0.74, 1.95)	1.25 (0.75, 2.10)	0.89
NHS	Median (range)	1.12 (0.65, 1.27)	1.38 (1.27, 1.48)	1.55 (1.48, 1.62)	1.71 (1.62, 1.80)	1.90 (1.80, 2.69)	-
	Case/control	63/75	74/75	68/76	60/75	49/75	-

	Model 1*	1.0	1.12 (0.66, 1.93)	0.77 (0.44, 1.35)	0.59 (0.33, 1.06)	0.44 (0.23, 0.82)	0.004
	Model 2†	1.0	1.37 (0.75, 2.51)	0.81 (0.43, 1.51)	0.70 (0.37, 1.33)	0.48 (0.24, 0.97)	0.02
<b>C24:0</b>							
HPFS	Median (range)	2.70 (1.31, 3.20)	3.56 (3.20, 3.79)	3.99 (3.80, 4.15)	4.37 (4.15, 4.58)	4.89 (4.58, 6.09)	-
	Case/control	87/163	83/163	77/163	115/164	83/163	-
	Model 1*	1.0	1.05 (0.66, 1.67)	0.98 (0.60, 1.61)	1.40 (0.85, 2.30)	0.99 (0.58, 1.71)	0.68
	Model 2†	1.0	1.06 (0.65, 1.73)	1.02 (0.60, 1.72)	1.40 (0.83, 2.35)	0.95 (0.53, 1.68)	0.81
NHS	Median (range)	2.38 (1.27, 2.69)	2.90 (2.69, 3.08)	3.23 (3.09, 3.40)	3.58 (3.40, 3.77)	4.10 (3.78, 5.70)	-
	Case/control	63/65	59/66	56/66	53/66	58/66	-
	Model 1*	1.0	0.87 (0.49, 1.54)	0.75 (0.43, 1.31)	0.72 (0.39, 1.31)	0.79 (0.41, 1.55)	0.36
	Model 2†	1.0	0.92 (0.48, 1.75)	0.75 (0.40, 1.39)	0.71 (0.37, 1.39)	0.65 (0.31, 1.36)	0.19
<b>Total</b>							
HPFS	Median (range)	4.37 (2.63, 5.00)	5.39 (5.00, 5.66)	5.92 (5.66, 6.21)	6.45 (6.21, 6.74)	7.14 (6.74, 8.76)	-
	Case/control	91/163	70/163	111/164	93/163	80/163	-
	Model 1*	1.0	0.86 (0.55, 1.34)	1.38 (0.86, 2.22)	1.12 (0.69, 1.82)	0.84 (0.49, 1.44)	0.70
	Model 2†	1.0	0.87 (0.54, 1.38)	1.38 (0.84, 2.28)	1.17 (0.70, 1.94)	0.81 (0.46, 1.43)	0.66
NHS	Median (range)	3.89 (2.22, 4.47)	4.76 (4.50, 5.01)	5.25 (5.02, 5.49)	5.72 (5.49, 5.99)	6.36 (6.00, 8.67)	-
	Case/control	65/65	54/66	64/66	59/66	47/66	-
	Model 1*	1.0	0.67 (0.37, 1.18)	0.74 (0.41, 1.32)	0.59 (0.33, 1.05)	0.42 (0.21, 0.84)	0.02
	Model 2†	1.0	0.80 (0.42, 1.54)	0.82 (0.43, 1.59)	0.60 (0.31, 1.15)	0.39 (0.18, 0.84)	0.02

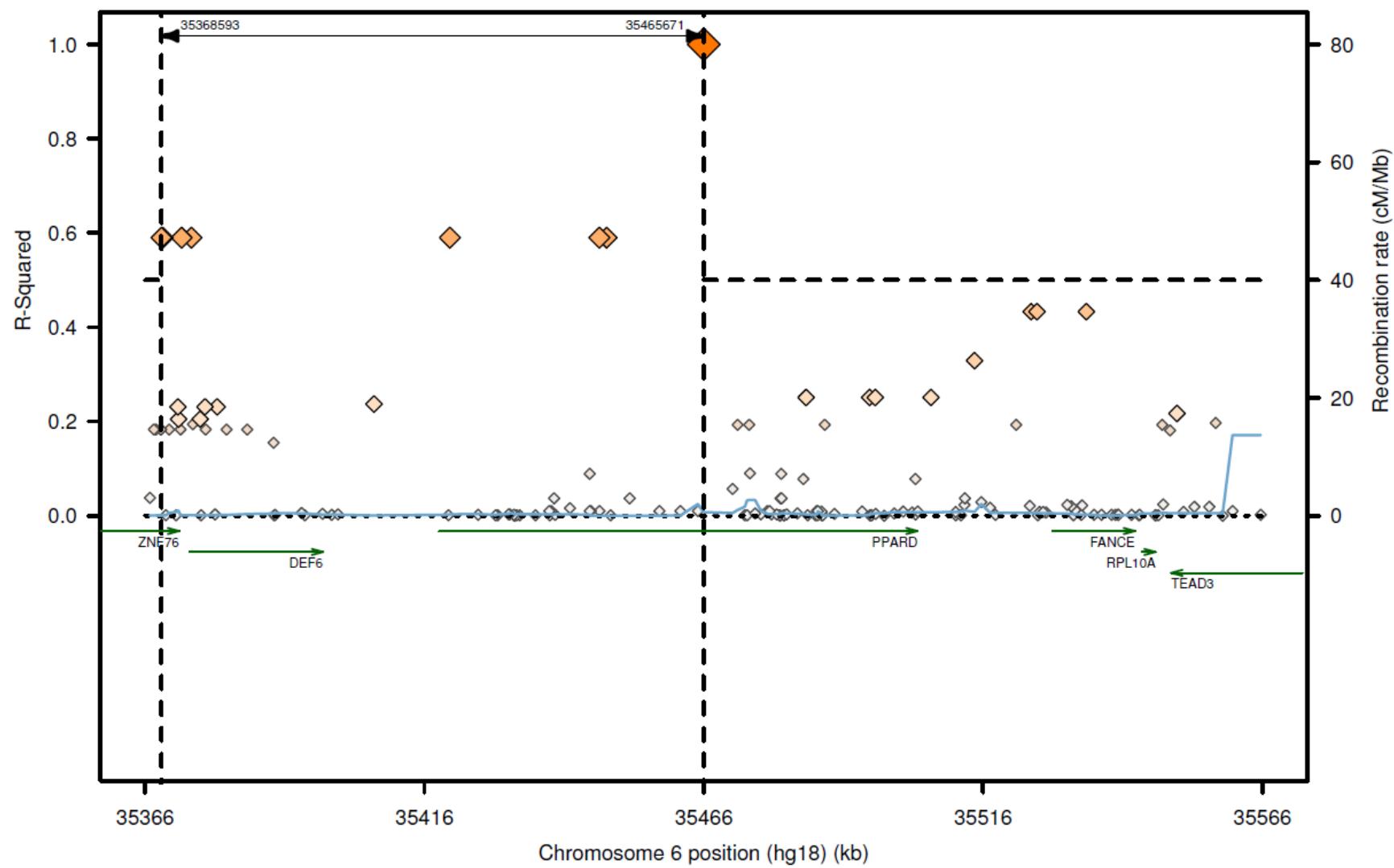
\*Model 1 was adjusted for the matching factors: age at blood draw, smoking status (never, past, current), fasting status (yes, no), and time of blood draw.

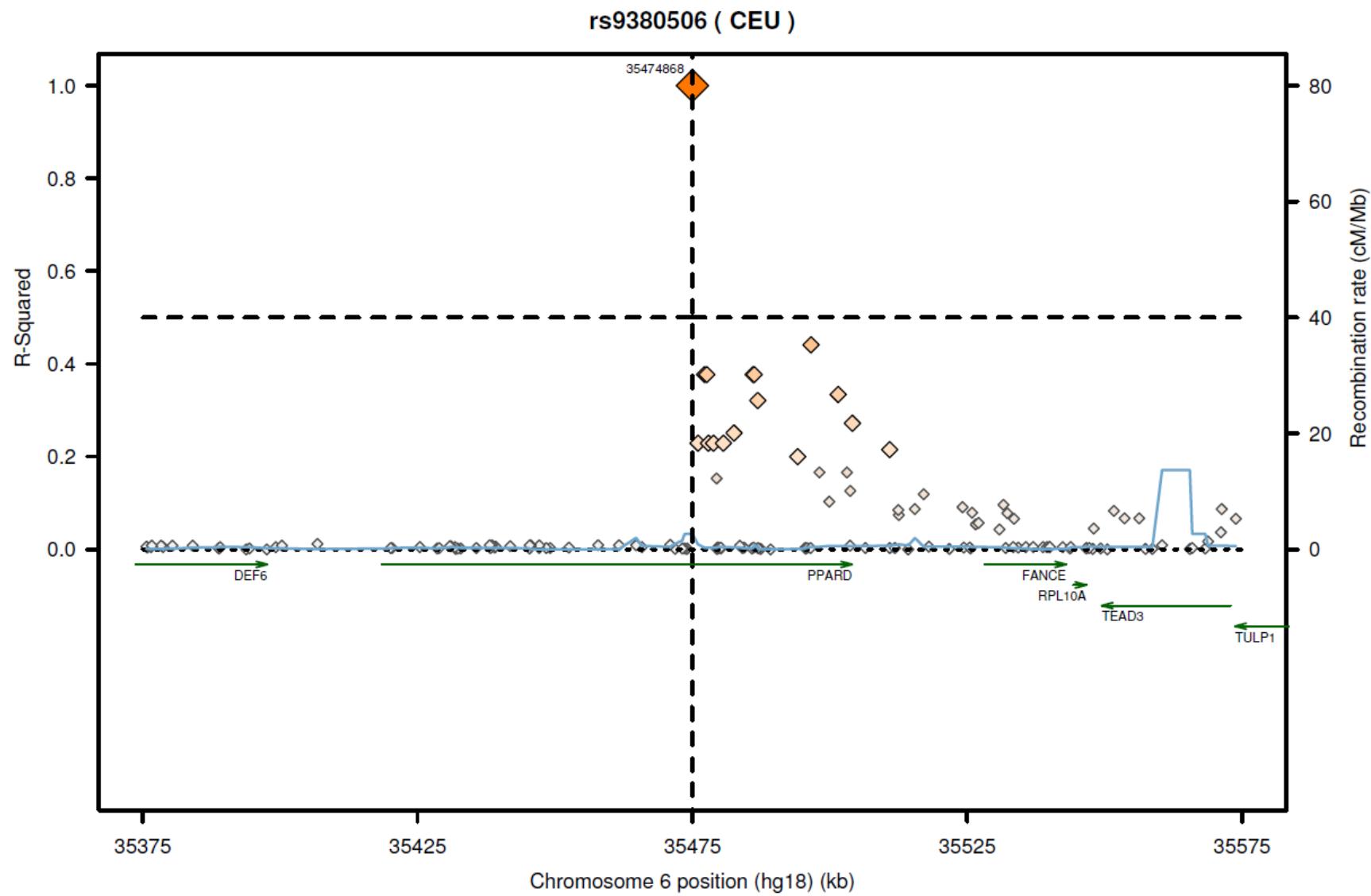
†Based on model 1, model 2 was further adjusted for body mass index ( $\text{kg}/\text{m}^2$ ), physical activity (METs-hr/week), alcohol use (abstainer, <5.0, 5.0-14.9, ≥15.0 g/day), parental history of MI before age 65 years (yes, no), menopausal status and hormone use (premenopausal, current user, past user, and non-user; NHS only), use of aspirin (yes, no), AHEI score, and history of hypercholesterolemia, diabetes, or hypertension (yes, no).



**Supplementary Figure 1.** Associations for joint categories between SNPs in the *PPARD* region and total long-chain saturated fatty acids (VLCSFAs) with coronary heart disease risk in US men and women. Multivariate conditional logistic regression models were adjusted for the same set of covariates listed in the footnote to Table 3. P values for interactions were calculated based on the interaction terms between log-transformed VLCSFA levels and genotypes (wild type homozygote vs. minor allele carrier). Results from the two cohorts were pooled using a fixed-effects model. A, rs3798343, P for interaction=0.031; B, rs9380506, P for interaction=0.039.

### rs3798343 ( CEU )





**Supplementary Figure 2.** Regional LD plots for rs3798343 and rs9380506.